CLAIMS

1. A body ply for a pneumatic tire, comprising an elastomeric sheet and a plurality of rows of reinforcement cords embedded therein.

2. A body ply as set forth in claim 1, wherein the reinforcement cords in one row are transversely staggered relative to the reinforcement cords in an adjacent row.

3. A body ply as set forth in claim 2, wherein the plurality of rows comprise two parallel rows of reinforcement cords.

4. A body ply as set forth in claim 1, wherein the plurality of rows comprise two parallel rows of reinforcement cords.

5. A body ply as set forth in claim 1, wherein the elastomer sheet is made of rubber.

6. A body ply as set forth in claim 1, wherein the sheet has a thickness of about 0.5 mm to about 2.0 mm.

7. A body ply as set forth in claim 6, wherein the sheet has a width of about 150 mm to about 250 mm.

8. A body ply as set forth in claim 1, wherein each row comprises between about 50 to about 600 cords.

9. A body ply as set forth in claim 8, wherein the cords each have a diameter of about 0.3 mm to about 2.0 mm.

10. A body ply as set forth in claim 9, wherein the reinforcement cords in each row are spaced from adjacent reinforcement cords in the same row a distance of about 0.1 mm to about 2.0 mm.

11. A method of making the body ply of claim 1, comprising the steps of:

introducing the reinforcement cords into a die assembly; and

extruding rubber into a cavity of the die assembly so that rubber is forced around and between the reinforcement cords.

12. A method as set forth in claim 11, wherein an insert is positioned upstream of the die cavity and wherein the reinforcement cords pass through the insert.

13. A method as set forth in claim 12, wherein the insert comprises a body portion with a plurality of passages extending from an entrance end to an exit end and wherein the passages are arranged in a plurality of rows corresponding to the desired placement and spacing of the reinforcement cords.

14. A method as set forth in claim 13, wherein the passages are arranged in two parallel rows.

15. A method as set forth in claim 14, wherein the openings in one row are transversely staggered relative to the openings in the other row.

16. A method as set forth in claim 11, wherein said introducing and said extruding steps comprise:

replacing an insert in an existing machine with an insert having the passages corresponding to the arrangement of reinforcement cords in the elastomeric sheet;

passing the reinforcement cords through the replacement insert and into a die assembly of the existing machine; and

extruding rubber into a cavity of the die assembly so that rubber is forced around and between the reinforcement cords.

17. A method as set forth in claim 11, further comprising the step of cutting the body ply material to size to form the body ply.

18. A method of making the body ply of claim 1, comprising the steps of:

replacing an insert in an existing machine used to make steel belts or single layer body ply material with an insert having the passages corresponding to the arrangement of reinforcement cords in the elastomeric sheet;

passing the reinforcement cords through the replacement insert and into a die assembly of the existing machine; and

extruding rubber into a cavity of the die assembly so that rubber is forced around and between the reinforcement cords.

19. A method of building a tire comprising the steps of:

wrapping the body ply of claim 1 around a tire-building drum; and

forming a generally axially extending seam with ends of the ply.

20. A method as set forth in claim 19, wherein said forming step comprises splicing the ends of the ply to form the generally axially extending seam.

21. A green tire incorporating the body ply of claim 1, the body ply having edges forming an axially extending seam.

22. A green tire as set forth in claim 21, wherein the body ply has sliced edges forming the axially extending seam.

23. A green tire as set forth in claim 21, wherein the reinforcement cords extend substantially parallel to the axis of the green tire.

24. A tire incorporating the body ply of claim 1, the body ply extending between beads and having lateral end portions turned respectively therearound.

25. A tire as set forth in claim 24, wherein the reinforcement cords extend substantially parallel to the axis of the tire.

26. A body ply for a pneumatic tire, comprising an elastomeric sheet and two parallel rows of reinforcement cords embedded therein;

each row comprising between about 50 to about 600 cords;

each cord having a diameter of about 0.3 mm to about 2.0 mm; and

the reinforcement cords in each row being spaced from adjacent reinforcement cords in the same row a distance of about 0.1 mm to about 3.8 mm.

27. A body ply as set forth in claim 27, wherein the reinforcement cords in one row are transversely staggered relative to the reinforcement cords in an adjacent row.

28. ~~26.~~ A pneumatic tire having a body ply which comprises an elastomer sheet and two parallel rows of reinforcement cords embedded therein;

each row comprising between about 50 to about 600 cords;

each cord having a diameter of about 0.3 mm to about 2.0 mm;

the reinforcement cords in each row being spaced from adjacent reinforcement cords in the same row a distance of about 0.1 mm to about 3.8 mm;

the reinforcement cords in one row being transversely staggered relative to the reinforcement cords in an adjacent row.